CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 80-29

NPDES NO. CA0028525

WASTE DISCHARGE REQUIREMENTS FOR:

SHELL OIL COMPANY
MARTINEZ MANUFACTURING COMPLEX
CHEMICAL OPERATIONS-EAST
PITTSBURG, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Shell Oil Company, Martinez Manufacturing Complex, Chemical Operations-East, Pittsburg (hereinafter discharger) filed an application dated November 5, 1979 for waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System.

2. A previous discharge was regulated by Resolution No. 68-36 adopted by the Board on June 20, 1968. This discharge was terminated on February 23, 1973.

3. The discharger manufactures dehydrogenation and hydrotreating catalysts and produces about 71,000 gallons per day of cooling waste and occasionally some small amount of process waste. This waste together with stormwater runoff and waste from neighboring Hysol/Dexter Corporation, are currently collected in an evaporation pond owned by Pacific Gas & Electric Company (PG&E). There is no discharge from this pond at present. The discharger has been notified by PG&E to terminate the diversion of waste to its evaporation pond.

4. The discharger proposes to discharge an average dry weather flow of 71,000 gallons per day of cooling and process waste into a ditch tributary to Suisun Bay, a water of the United States. During wet weather periods, the waste includes stormwater runoff from the plant areas subject to contamination with process materials. Waste from Hysol/Dexter Corporation will be regulated in a separate NPDES permit, but will continue to be discharged into the ditch system receiving the Shell waste. The limitations specified in this Order shall apply to the Shell component of the combined discharge, and compliance will be determind by subtracting the Hysol/Dexter component.

5. In April 1975 the Board adopted a Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan).

6. The beneficial uses of Suisun Bay and contiguous waters, as identified in the Basin Plan, are:

   a. Recreation (contact and non-contact).
   b. Fish migration and spawning.
   c. Habitat for wildlife and estuarine organisms including some rare and endangered species.
   d. Industrial water supply.
   e. Esthetic enjoyment.
   f. Navigation.
   g. Commercial and sport fishing.

7. The Basin Plan prohibits the discharge of any wastewater which has particular characteristics of concern to beneficial uses into any non-tidal water or dead end slough or similar confined water areas or their immediate tributaries. The receiving waters for the discharge constitutes a confined area similar to a dead end slough.

8. The Board finds that the discharge of waste from the discharger contains only negligible amounts of pollutants and has no particular characteristics of concern to beneficial uses. Therefore, the Basin Plan prohibition does not apply to this waste discharge.

9. Effluent limitation, toxic effluent standards, established pursuant to Sections 208(b), 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.

10. This project involves the continued operation of a privately-owned facility with negligible or no expansion of use beyond that previously existing. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15101, Title 14, California Administrative Code.

11. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirments for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Prohibition

The discharge of process waste, cooling water containing water treatment additives and catalysts into the storm drainage system is prohibited.

B. Effluent Limitations

1. Except as provided under B.4 the discharge of waste 001 which contains constituents in excess of the following limits is prohibited:

Constituents	Units	30-Day Average	Maximum Daily
a. Total Suspended Solids*	mg/l	20	30
	lbs/day	11.8	17.8
b. Oil & Grease*	mg/l	15	20
	lbs/day	8.9	11.8
c. Nickel*	mg/l	-	1.0
	lbs/day	-	0.6
d. Chromium* (total)	mg/l	-	0.25
	lbs/day	-	0.15
e. Zinc*	mg/l	-	0.5
	lbs/day	-	0.3

*Incremental increase above influent waste concentration from Hysol Dexter.

2. The waste as discharged shall not have a pH of less than 6.5 nor greater than 8.5.

3. In any representative set of samples the survival of test organisms acceptable to the Board in the waste as discharged shall achieve a median of 90% survival for three consecutive samples, and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

4. During periods in which the waste contains stormwater runoff, its pH shall not be less than 6.0 nor greater than 9.0, the following limitations shall apply:

Constituents	Units	Maximum Daily
Oil & Grease	mg/l	30

5. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of turbidity or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State at any place within one foot of the water surface:

a.	Dissolved oxygen	7.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	pH	Variation from natural ambient pH by more than 0.2 pH units.
c.	Un-ionized Ammonia	0.025 mg/l as N, Annual Median 0.4 mg/l as N, maximum

D. Provisions

1. The discharge shall comply with the following:

   a. The maximum temperature shall not exceed the natural receiving water temperature by more than $20^{o}F$.

b. No discharge shall cause a surface water temperature rise greater than 4°F above the natural temperature of the receiving waters at any time or place.

c. The maximum temperature shall not exceed 86°F.

2. The discharger shall analyze storm runoff tributary to and leaving the plant site for iron in accordance with study specifications satisfactory to the Executive Officer. A report on that study shall be filed with the Regional Board by May 1, 1981. The Board will consider establishing limitations on iron concentration in waste containing storm runoff from the plant site after reviewing the report.

3. This Order includes the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except items A.5, B.2, and B.5.

4. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing provided the Regional Administrator, U. S. Environmental Protection Agency, has no objections.

5. This permit may be modified, or, alternatively, revoked and reissued, to comply with any applicable effluent limitation issued pursuant to the Order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et. al. v. Russell E. Train, 8 ERC 2120 (D.D.C. 1976), if the effluent limitation so issued:

   (a) is different in conditions or more stringent than any effluent limitation in the permit; or

   (b) controls any pollutant not limited in the permit.

6. This Order expires on May 20, 1985, and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality control Board, San Francisco Bay Region, on May 20, 1980.

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provisions, Reporting Requirements & Definitions - April 1977
Self-Monitoring Program

0-80-29

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

SHELL OIL COMPANY, MARTINEZ MANUFACTURING

COMPLEX, CHEMICAL OPERATIONS-EAST

PITTSBURG

NPDES NO. CA 0005789

ORDER NO. 80-29

CONSISTS OF

PART A, dated January 1978

AND

PART B

OS-3

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. Influent Waste Stream

Station	Description
I-1	At any point north of Hysol Corporation, in the Shell Chemical plant, prior to Shell's stormwater runoff, cooling and process waste mixing with Hysol waste.

B. Effluent

Station	Description
E-001	At any point in the outfall from the waste 001 treatment facilities to the discharge point, at which all waste tributary to that outfall is present. E-001 is identified in the Attachment A.

C. Receiving Waters

Station	Description
C-O-N	20 feet northerly from the confluence of the outfall channel (001) with Suisun Bay. This confluence is referred to as zero point hereafter.
C-1-W	100 feet northwesterly from the zero point.
C-1-N	100 feet northerly from the zero point.
C-1-E	100 feet northeasterly from the zero point.
C-3-W	300 feet northwesterly from the zero point.
C-3-N	300 feet northerly from the zero point.
C-3-E	300 feet northeasterly from the zero point.
C-R-1	In Suisun Bay, located within 100 feet offshore, and 1000 feet easterly from the zero point.
C-R-2	In Suisun Bay, located within 100 feet offshore, and 1000 feet westerly from the zero point.

D. Land Observations

Station	Description
P-1 thru P-3	Located along the drainage ditch west of the Shell Chemical Company, Martinez Manufacturing Complex. (A sketch showing the location of these stations shall accompany each report)
P-4	Located along the perimeter of station E-001.

II. SCHEDULE OF SAMPLING AND ANALYSIS AND REPORTING

A. The schedule of sampling and analysis shall be that given as Table I.

III. MODIFICATION OF PART A

Delete: C.3, C.4, and D.3.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring program:

1. Has been developed in accordance with the procedure set forth in this Regional Board Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 80-29.

2. Is effective on the shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachments:
Table I
Attachment A

Effective Date _____

Order No. 80-29

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1			E-001			C-O-N thru C-R-2		P-1 thru P-3		P-4	
TYPE OF SAMPLE	Cont	C-24	G	Cont	C-24	G	G	O	G	O	G	O
Flow Rate (mgd)	Cont			Cont								
BOD, 5-day, 20° C, or COD (mg/l & kg/day)												
Chlorine Residual & Dosage (mg/l & kg/day)												
Settleable Matter (ml/1-hr. & cu. ft./day)												
Total Suspended Matter (mg/l & kg/day)			Q			Q						
Oil & Grease (mg/l & kg/day) (1)			Q			Q						
Coliform (Total or Fecal) (MPN/100 ml) per req't												
Fish Toxicity, 96-hr. TL_{50} % Survival in undiluted waste			Q			Q						
Ammonia Nitrogen (mg/l & kg/day)												
Nitrate Nitrogen (mg/l & kg/day)												
Nitrite Nitrogen (mg/l & kg/day)												
Total Organic Nitrogen (mg/l & kg/day)												
Total Phosphate (mg/l & kg/day)												
Turbidity (Jackson Turbidity Units)												
pH (units)			M			M	M		M		M	
Dissolved Oxygen (mg/l and % Saturation)												
Temperature (°C)						W			M		M	
Apparent Color (color units)												
Secchi Disc (inches)												
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)												
Arsenic (mg/l & kg/day)												
Cadmium (mg/l & kg/day)												
Chromium, Total (mg/l & kg/day)												
Copper (mg/l & kg/day)												
Cyanide (mg/l & kg/day)												
Silver (mg/l & kg/day												
Lead (mg/l & kg/day)												

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1			E-001			C-O-N C-R-2 thru		P-1 thru P-3		P-4		
TYPE OF SAMPLE	Cont	C-24	G	Cont	C-24	G	G	O	G	O	G	O	
Mercury (mg/l & kg/day)													
Nickel (mg/l & kg/day)		Q			Q								
Zinc (mg/l & kg/day)		Q			Q								
PHENOLIC COMPOUNDS (mg/l & kg/day)													
All Applicable Standard Observations								Q		Q		Q	
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)													
Chromium Total (mg/l)		Q			Q								
Iron (Total) (mg/l)					(2)								

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour

Cont = continuous sampling

O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations

FREQUENCY OF SAMPLING

M = once each month
W = once per week

Q = quarterly, once in March, June, Sept. and December

Cont = continuous

(1) Samples should be collected one hour after the first rainstorm in each calendar quarter, and every 2 hours thereafter. A total of three consecutive samples are required

(2) Samples should be collected one hour after the first rainstorm in each calendar quarter and 24 hours thereafter for three consecutive days.

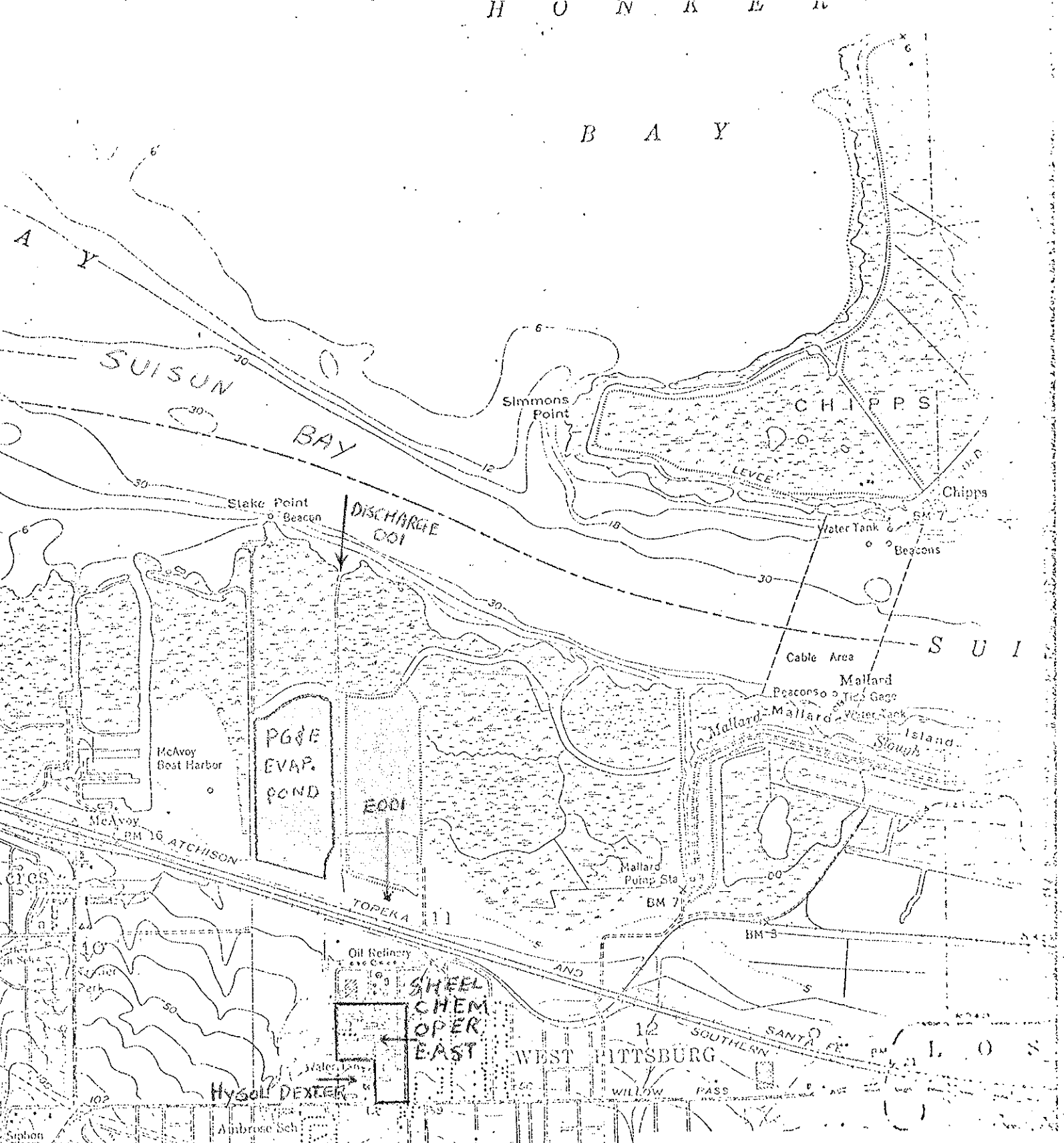

FIGURE 2
"LOCATION MAP"
FROM USGS MAP 1953
N3800-W 12152.5/7.5
SHELL OIL COMPANY
MARTINEZ MANUFACTURING COMPLEX
CHEMICAL OPERATIONS-EAST
PITTSBURG, CONTRA COSTA, CALIFORNIA

ATTACHMENT B